

Characteristics Of Collection Obtained On The Basis Of Cynara L, Silybum Marianum, Flores Helichrysi Arenarii, Stigmata Maydis Relating To The Expression Of Hepatoprotective Action

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Abstract – The paper involves the data that the plant collection obtained based on *Cynara L, Silybum marianum, Flores Helichrysi arenarii, Stigmata Maydis* in relation to the severity of the hepatoprotective effect. Acute toxic hepatitis (ATH) was induced in male rats using paracetamol. Certain pharmacological and biochemical parameters were determined. The studied plant collection obtained based on *Cynara L, Silybum marianum, Flores Helichrysi arenarii, Stigmata Maydis* gives the possibility of pharmacy correction during the development of pharmacodeficiency states with parallel restoration of the metabolic-functional state of the organism.

Keywords – Acute Toxic Hepatitis, Liver, Hepatoprotective Action, Collection Of Plants, Rats.

At present time, our country pays great attention to the implementation of scientific achievements and innovative developments into practice. The Action Strategy for the Further Development of the Republic of Uzbekistan emphasizes "... stimulation of research and innovation activities, the creation of effective mechanisms for the introduction of scientific and innovative achievements into practice are essential" [6]. Based on these tasks, of great scientific and practical importance is the determination of the mechanism of action of natural biologically active compounds, isolated from local plants, in the system of regulation of cell volume and the creation of new pharmacological preparations on their basis.

The actuality of solving the problem of preserving the health of the population poses immediate tasks for health care in the use of effective hepatoprotective preparations. Today there is a large arsenal of medicines for the pharmacological correction of various liver diseases. Domestic scientists developed and recommended for clinical use a number of local herbal preparations with broad pharmacodynamics effects in liver diseases (1,2,7,9,10).

The problem of infectious and toxic hepatitis in modern medicine remains relevant; this is due to the significant prevalence of hepatitis, especially toxic, in many regions of the world, including highly industrialized countries. As the analysis of the literature shows, most of the preparations used in this pathology do not always have the desired therapeutic effect, quite often cause side effects, and sometimes severe complications [3,5,8,11].

In this position, the creation of new, more advanced medicines based on local raw materials and their introduction into health care practice is a very urgent problem. In this regard, plant collection is of considerable interest, received on the basis of plants *Cynara algarbiensis* (Artichoke), *Helichrysum arenarium* (Immortelle), *Zea maydis styli cum stigmati* (Corn stalks with stigmas), fruits of *Silybum marianum* (Milk thistle) [4].

In connection with the above, the main goal of this work was to study the effect of a new drug collection based on *Cynara L*, *Silybum marianum*, *Flores Helichrysi arenarii*, *Stigmata Maydis* in various experimental models of hepatitis.

Acute toxic hepatitis (ATH) was induced in male rats (140-200 g) using paracetamol, which was orally administered directly into the stomach for 7 days. In the experiment, there were six groups, each group of 6 rats: group 1 – Control. No acute hepatitis was induced in rats and no study drugs were administered; Group 2 is intact. Rats with acute hepatitis were injected intragastrically with distilled water; 3rd group - 1-experimental. Rats with acute hepatitis were injected intragastrically with a solution of the drug collection obtained based on: *Cynara L*, *Silybum marianum*, *Flores Helichrysi arenarii*, *Stigmata Maydis*, diluted with distilled water at a dose of 1/100 mg / kg (in terms of extractive substances); 4th group - 2-test. Rats with acute hepatitis were injected intragastrically with a solution of the drug collection obtained based on: *Cynara L*, *Silybum marianum*, *Flores Helichrysi arenarii*, *Stigmata Maydis*, diluted with distilled water at a dose of 2/100 mg / kg (in terms of extractives); 5th group - 3-experienced. Rats with acute hepatitis were injected intragastrically with a solution of the drug collection obtained based on: *Cynara L*, *Silybum marianum*, *Flores Helichrysi arenarii*, *Stigmata Maydis*, diluted with distilled water at a dose of 3/100 mg / kg (in terms of extractives); 6th group - comparisons. Rats with acute hepatitis were injected intragastrically with legalon solution.

The duration of the research was 7 days. The research substances were administered to animals according to the “prevention + treatment” scheme. For 7 days, the research preparations were injected intragastrically to the animals of the experimental group and comparison group, and distilled water was injected into the intact group.

On the 1st day of the research, animals of all groups (except for the control) were induced acute hepatitis one hour after the administration of the drugs. For the induction of acute hepatitis, acetaminophen (paracetamol) (Limited liability company that Pharm standard – Leksredstva (medicines), Russia) was used at a dose of 1500 mg / kg, once. After the induction of pathology, the animals received the research drugs in the same doses on the following days. They were observed for 7 days, received dry extract (DE) such as 1ml / 100g, 2ml / 100g, and 3ml / 100g. 1st to 5th day. On the 6th and 7th day, DE was injected, and an hour later, paracetamol.

The activity of indicator enzymes of cytolytic syndrome (alanine aminotransferase (AlAT) and aspartate aminotransferase (AsAT) and alkaline phosphatase in blood serum) was determined; protein-synthesizing function of the liver – according to the content of total protein, glucose is in blood serum [12]. The reference – preparation for the determination of acute toxic hepatitis was legalon hepatoprotector.

The animals were kept on a standard vivarium diet. All manipulations with them were carried out in accordance with the rules adopted by the European convention for the protection of vertebrate animals used for experimental and other purposes (Strasbourg, 1986).

The obtained data that reveal the possibility of carrying out targeted work related to the modification of their structure in order to obtain new compounds of this series with a more pronounced hepatoprotective activity. The completed cycle of works on the study of the hepatoprotective activity of the studied drug collection, opens up the prospect of use in medical practice for the purpose of pharmacological correction in the development of pharmacodeficiency conditions with parallel restoration of the metabolic-functional state of the whole organism.

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